



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,913	09/17/2003	Peter Sopp	A34661-PCT-USA	7118
21003	7590	12/05/2005	EXAMINER	
BAKER & BOTTS 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			BARNES, CRYSTAL J	
			ART UNIT	PAPER NUMBER

2121

DATE MAILED: 12/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/937,913	SOPP ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Crystal J. Barnes	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2005 and 11 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 11 and 14-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11 and 14-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The following is a Final Office Action in response to the Amendments received on 10 August and 11 October 2005. Claims 1-10, 12 and 13 have been cancelled. Claims 11, 14-19, 21 and 23 have been amended. Claims 11 and 14-23 remain pending in this application.

#### ***Drawings***

2. The replacement drawing was received on 10 August 2005. This drawing is acceptable.

#### ***Specification***

3. The amendment to the abstract was received on 10 August 2005. This correction is acceptable.

#### ***Claim Objections***

4. The amendments to the claims were received on 10 August 2005. These corrections are acceptable.

*Claim Rejections - 35 USC § 102*

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 11 and 14-23 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 4,037,087 to Foulds.

As per claim 11, the Foulds reference discloses a master control system for a rolling mill, comprising at least one rolling stand (see column 3 lines 4-7, "STAND-1 through STAND-N"), driven by a drive system (see column 3 lines 12-15, 22-25, "drive motor 16, screwdown mechanism 23"), an automation device ("speed controllers 17, screwdown controllers 25") for the open-loop and/or closed-loop control of the rolling stand ("STAND-1 through STAND-N"), and a commissioning computer (see column 3 lines 15-20, 30-35, "operator's desk 20"), wherein the commissioning computer ("operator's desk 20") is designed for the commissioning of the drive system ("drive motor 16, screwdown mechanism 23") and of the automation device ("speed controllers 17, screwdown controllers 25"), and further comprising at least one bus system (see column 3 lines 15-20, 30-35, "bus 21, 27, 28") for the transmission of operating parameters and/or program code ("speed

preset signals, screwdown preset signals") from the commissioning computer ("operator's desk 20") to at least one component comprising the drive system ("drive motor 16, screwdown mechanism 23") and the automation device ("speed controllers 17, screwdown controllers 25"), and further wherein the bus system ("bus 21, 27, 28") is designed for the transmission of information (see column 3 lines 12-15, 22-25, "automatic speed control loops, automatic roll position control loops") necessary for the operation of the rolling mill (see column 3 line 5, "hot strip rolling mill 10") between the drive system ("drive motor 16, screwdown mechanism 23") and the automation device ("speed controllers 17, screwdown controllers 25"), said control system (see column 3 lines 4-7, "conventional computer") further comprising an operator-control computer (see column 3 lines 15-20, 30-35, "control computer 19") for monitoring and/or influencing ("supplies separate speed and screwdown preset signals") the rolling mill ("hot strip rolling mill 10"), and wherein the commissioning computer ("operator's desk 20") is designed for the commissioning of the operator-control computer ("control computer 19") and further wherein the bus system ("bus 21, 27, 28") is designed for the transmission of operating parameters and/or program code ("speed preset

signals, screwdown preset signals") from the commissioning computer ("operator's desk 20") to the operator-control computer ("control computer 19").

As per claim 14, the Foulds reference discloses the bus system (see column 3 lines 15-20 and 30-35, "buses 21, 22, 27, 28, 29") is designed for the transmission of information ("speed preset signals, screwdown preset signals, update program") necessary for the operation of the rolling mill ("hot strip rolling mill 10") between the operator-control computer ("control computer 19") and at least one of the components comprising the drive system ("drive motor 16, screwdown mechanism 23") and the automation device ("speed controllers 17, screwdown controller 25").

As per claim 15, the Foulds reference discloses further comprising at least one first bus system (see column 4 lines 10-14, "buses 38, 39") for the transmission of operating parameters and/or program code (see column 3 lines 15-20 and 30-35, "speed preset signals, screwdown preset signals, update program") from the commissioning computer ("operator's desk 20") to the automation device ("speed controllers 17, screwdown controller 25"), so that the commissioning computer ("operator's desk 20") and the automation device ("speed controllers 17, screwdown controller 25") are connected by a data link ("buses 38, 39"), and at least one

second bus system ("buses 21, 27, 28") for the transmission of operating parameters and/or program code ("speed preset signals, screwdownd preset signals, update program") to the drive system ("drive motor 16, screwdownd mechanism 23"), so that the automation device ("speed controllers 17, screwdownd controller 25") and the drive system ("drive motor 16, screwdownd mechanism 23") are connected by a data link ("buses 21, 27, 28").

As per claim 16, the Foulds reference discloses a second bus system ("buses 21, 27, 28") is designed for the transmission of information ("speed preset signals, screwdownd preset signals, update program") necessary for the operation of the rolling mill ("hot strip rolling mill 10"), between the automation device ("speed controllers 17, screwdownd controller 25") and the drive system ("drive motor 16, screwdownd mechanism 23").

As per claim 17, the Foulds reference discloses wherein the operator-control computer ("control computer 19") for monitoring and/or influencing ("supplies separate speed and screwdownd preset signals") the rolling mill ("hot strip rolling mill 10"), wherein the operator-control computer ("control computer 19") is connected to the first bus system ("buses 38, 39") by a data link ("buses 38, 39"), and the first bus system ("buses 38, 39") is designed for the transmission of

Art Unit: 2121

information ("speed preset signals, screwdownd preset signals, update program") necessary for the operation of the rolling mill ("hot strip rolling mill 10") between the operator-control computer ("control computer 19") and the automation device ("speed controllers 17, screwdownd controller 25").

As per claim 18, the Foulds reference discloses further comprising at least two automation devices ("speed controllers 17, screwdownd controller 25") of different types and wherein the commissioning computer ("operator's desk 20") is designed for the commissioning ("supplies separate speed and screwdownd preset signals") of both automation devices ("speed controllers 17, screwdownd controller 25").

As per claim 19, the Foulds reference discloses the rolling mill ("hot strip rolling mill 10") is a mill train (see column 3 lines 4-7, "finishing train").

As per claim 20, the Foulds reference discloses a rolling mill comprising at least one rolling stand (see column 3 lines 4-7, "STAND-1 through STAND-N") driven by a drive system (see column 3 lines 12-15, 22-25, "drive motor 16, screwdownd mechanism 23"), and a master control system (see column 3 lines 4-7, "conventional computer") with an automation device (see column 3 lines 12-15, 22-25, "speed controllers 17, screwdownd controllers 25") for the open-loop and/or



Art Unit: 2121

closed-loop control of the rolling stand ("STAND-1 through STAND-N"), and a commissioning computer (see column 3 lines 37-40, "operator's desk 20"), wherein the commissioning computer ("operator's desk 20") is designed for the commissioning of the drive system ("drive motor 16, screwdown mechanism 23") and of the automation device ("speed controllers 17, screwdown controller 25"), further comprising at least one bus system (see column 3 lines 15-20 and 30-35, "buses 21, 27, 28") for the transmission of operating parameters ("speed preset signals, screwdown preset signals") and/or program code ("update program") from the commissioning computer ("operator's desk 20") to at least one component comprising the drive system ("drive motor 16, screwdown mechanism 23") and the automation device ("speed controllers 17, screwdown controller 25"), and wherein the bus system ("buses 21, 27, 28") is designed for the transmission of information ("speed preset signals, screwdown preset signals, update program") necessary for the operation of the rolling mill ("hot strip rolling mill 10"), between the drive system ("drive motor 16, screwdown mechanism 23") and the automation device ("speed controllers 17, screwdown controller 25"), said control system (see column 3 lines 4-7, "conventional computer") further comprising an operator-control computer (see column 3 lines 15-20, 30-35, "control computer 19") for monitoring

Art Unit: 2121

and/or influencing ("supplies separate speed and screwdown preset signals") the rolling mill ("hot strip rolling mill 10"), and wherein the commissioning computer ("operator's desk 20") is designed for the commissioning of the operator-control computer ("control computer 19") and further wherein the bus system ("bus 21, 27, 28") is designed for the transmission of operating parameters and/or program code ("speed preset signals, screwdown preset signals") from the commissioning computer ("operator's desk 20") to the operator-control computer ("control computer 19").

As per claim 21, the Foulds reference discloses said mill ("hot strip rolling mill 10") is a mill train (see column 3 lines 4-7, "finishing train").

As per claim 22, the Foulds reference discloses a method of operating a rolling mill, comprising utilizing a master control system (see column 3 lines 4-7, "conventional computer") comprising a rolling mill ("hot strip rolling mill 10"), having at least one rolling stand (see column 3 lines 4-7, "STAND-1 through STAND-N") driven by a drive system (see column 3 lines 12-15, 22-25, "drive motor 16, screwdown mechanism 23"), an automation device (see column 3 lines 12-15, 22-25, "speed controllers 17, screwdown controllers 25") for the open-loop and/or closed-loop control of the rolling stand ("STAND-1 through STAND-N"), and a

commissioning computer (see column 3 lines 37-40, "operator's desk 20"), wherein the commissioning of the drive system ("drive motor 16, screwdown mechanism 23") and of the automation device ("speed controllers 17, screwdown controllers 25") takes place by means of the same commissioning computer ("operator's desk 20"), and further comprising a bus system (see column 3 lines 15-20 and 30-35, "buses 21, 27, 28") for the transmission (i) of operating parameters ("speed preset signals, screwdown preset signals") and/or program code ("update program") from the commissioning computer ("operator's desk 20") to at least one of the components comprising the drive system ("drive motor 16, screwdown mechanism 23") and the automation device ("speed controllers 17, screwdown controller 25"), and (ii) of information necessary ("speed preset signals, screwdown preset signals, update program") for the operation of the rolling mill ("hot strip rolling mill 10"), between the drive system ("drive motor 16, screwdown mechanism 23") and the automation device ("speed controllers 17, screwdown controller 25"), and wherein the bus system ("buses 21, 27, 28") is designed for the transmission of information ("speed preset signals, screwdown preset signals, update program") necessary for the operation of the rolling mill ("hot strip rolling mill 10"), between the drive system ("drive motor 16, screwdown mechanism 23") and the automation device

("speed controllers 17, screwdown controller 25"), said control system (see column 3 lines 4-7, "conventional computer") further comprising an operator-control computer (see column 3 lines 15-20, 30-35, "control computer 19") for monitoring and/or influencing ("supplies separate speed and screwdown preset signals") the rolling mill ("hot strip rolling mill 10"), and wherein the commissioning computer ("operator's desk 20") is designed for the commissioning of the operator-control computer ("control computer 19") and further wherein the bus system ("bus 21, 27, 28") is designed for the transmission of operating parameters and/or program code ("speed preset signals, screwdown preset signals") from the commissioning computer ("operator's desk 20") to the operator-control computer ("control computer 19").

As per claim 23, the Foulds reference discloses the rolling mill ("hot strip rolling mill 10") is a mill train (see column 3 lines 4-7, "finishing train").

### *Response to Arguments*

7. Applicant's arguments, see Remarks pages 10-12, filed 10 August 2005, with respect to the rejections of claims 11 and 17 under 35 USC 102 and 35 USC 103 have been fully considered and are persuasive. Therefore, the rejection has been

clarified so that it is clear that the controllers are the automation devices and the control computer is the operator-control computer.

*Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following reference is cited to further show the state of the art with respect to computer integrated manufacturing in general:

DE Pub. No. 4127531 A1 to SCHOTT

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened


statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Crystal J. Barnes whose telephone number is 571.272.3679. The examiner can normally be reached on Monday-Friday alternate Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571.272.3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CJB  
29 November 2005



Anthony Knight  
Supervisory Patent Examiner  
Group 3600